

Shifting the Care and Payment Paradigm for Vulnerable Children

Jennifer Jonas, Jennifer Eder, Kathleen Noonan, David Rubin, Evan Fieldston

EXECUTIVE SUMMARY

The U.S. health care system is undergoing dramatic changes focused on improving patient experiences, lowering per capita costs and improving population health.¹ Achieving these goals will require new ways of providing care and new partnerships both inside and outside of traditional health care settings. As the country moves toward new care models that seek to provide patients with more high-value care², the challenges related to caring for vulnerable children, in particular those with certain psychosocial and economic risk factors, require attention.

The influence that socioeconomic status has on children's health and well-being is reflected in higher morbidity for chronic disease, higher health care resource utilization and higher health care costs, especially in hospital settings. However, existing reimbursement structures do not sufficiently account for the influence that socioeconomic status has on health care utilization and subsequently on health care workload. For example, while the Diagnostic Related Group (DRG) reimbursement system^a includes an adjustment for illness severity, it does not adjust for the costs associated with treating patients with psychosocial and economic risk factors, such as poor housing conditions, food insecurity and childhood trauma. Similarly, under the per diem reimbursement model^b, extra hospital days that do not meet certain inpatient criteria are not reimbursed even though the extra days may be necessary

KEY FINDINGS

- Children from lower-income ZIP codes accrue higher inpatient hospital costs reflecting higher levels of resource utilization compared to similar children from higher-income ZIP codes.^c
- Children from lower-income ZIP codes stay in the hospital longer and require additional services while hospitalized. Additional services may include social work involvement, enhanced case management and additional time with clinical staff.
- Low-income children with select conditions experience higher rates of mortality in the hospital.

to ensure a safe and effective discharge for disadvantaged children. As a result, hospitals and health systems that serve large low-income populations are not reimbursed for services rendered to address these increased needs. In fact, payers for patients at greatest risk, such as Medicaid for those with low income, typically have the lowest reimbursements. The double impact of greater patient-level needs but lower system-level payments means that health systems and providers are under-resourced to provide holistic, high-value care to vulnerable patients.

The Affordable Care Act's (ACA)³ drive towards higher-value health care has led to increased scrutiny of both the quality

^a Diagnostic Related Group (DRG) reimbursement system: hospitals receive a fixed payment for each hospital admission based on the patient's diagnosis and illness severity score (they are not reimbursed for each service rendered).

^b Per-diem reimbursement system: hospitals receive a fixed payment for each day a patient is in the hospital, regardless of the services they receive during that day.

^c Under existing payment models, higher inpatient costs to hospitals do not necessarily result in higher hospital reimbursements. How hospitals are reimbursed for services depends on the contract that hospitals have with individual private insurance companies and public payers, such as state Medicaid programs. Often, hospital reimbursements are based on a patient's diagnosis and illness severity or a fixed per-diem payment for as long as the patient meets certain clinical inpatient criteria.

and cost of patient care. Public and private payers are shifting towards payment models that hold hospitals more accountable for patient and population health, such as pay-for-performance reimbursement systems, which reward and penalize hospitals based on patients' health outcomes, and Accountable Care Organizations (ACOs), which require hospitals to manage the full continuum of care for a defined population. As providers and payers devise new methods to deliver high-value care, they will need to account for the costs associated with treating children with psychosocial and economic risk factors so that health systems can provide holistic, preventive care, as well as clinical and non-clinical services that are essential to children's overall health.

To better understand the relationship between socioeconomic status and the processes of care that enhance value and health outcomes for children, investigators at PolicyLab and the Children's Hospital Association (CHA) conducted a series of studies from

2009 to 2013 analyzing service utilization at children's hospitals across the country. These studies examined children's health care resource utilization, hospital length of stay and inpatient mortality in relation to ZIP code-based median annual household income and confirmed that children with psychosocial and economic risk factors have higher health care costs. Based on these findings, we argue that to meet the ACA's promise of high-value care, we cannot simply focus on reducing hospital lengths of stay or lowering costs in the short term. Instead, we need to incentivize health systems to redirect resources toward alleviating the consequences of poverty that worsen health and increase health care costs. In this Evidence to Action brief, we discuss the connection between poverty and child health, describe the evidence from the PolicyLab-CHA studies and offer ideas about how to redirect resources to improve health outcomes for children with psychosocial and economic risk factors.

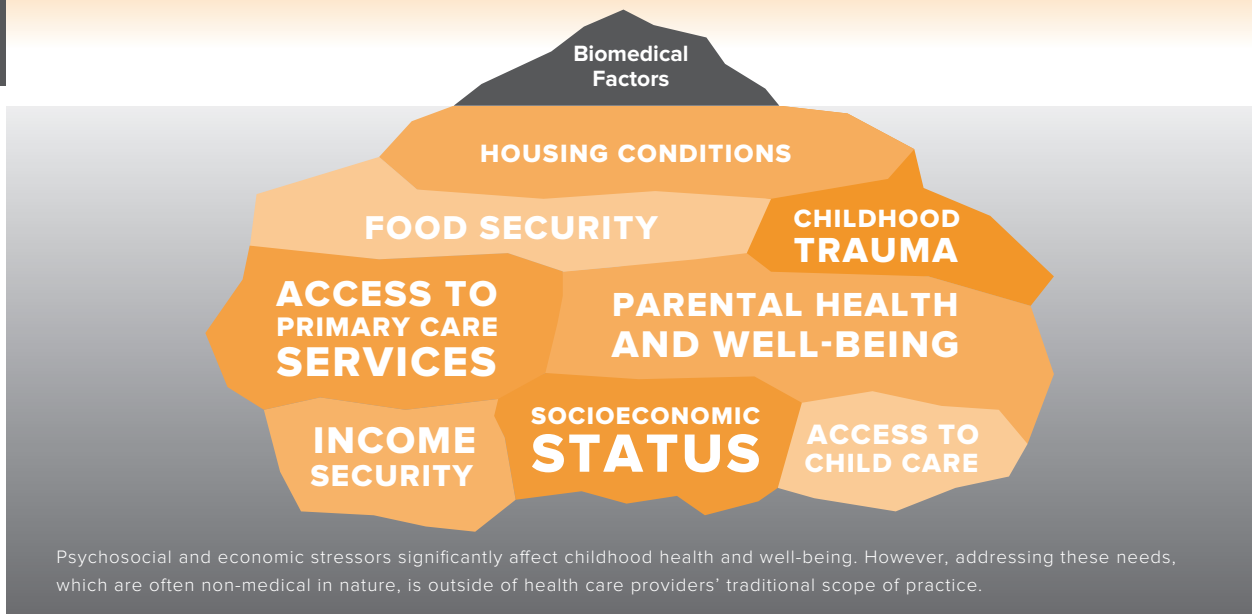
OPPORTUNITIES FOR ACTION

For providers (hospitals, health systems and clinicians):

- 1** Develop and implement a tool to screen for psychosocial and economic risk factors in real time and "score" this risk so that it can be used in risk-adjustment and payment models. This tool should be used to collect, document and update psychosocial information in a systematic way as part of a child's history and physical exam during patient encounters.
- 2** Use information gleaned from the screening tool to identify appropriate resources to help the patient and family address unmet needs that negatively affect health outcomes.
- 3** Build direct linkages at the point of care (either through internal staff or through formally funded strategic partnerships with local nonprofits) that will more efficiently provide families with resources that can alleviate the impact of poverty on health and health care utilization.

For payers (public and private):

- 1** Establish payment reforms that incorporate psychosocial and economic risk factors into health care reimbursement models.
- 2** Leverage flexibility in Medicaid financing to incentivize health systems to either a) increase internal social work staffing, or b) expand partnerships or co-locate with external nonprofit organizations that will create more direct and efficient linkages to needed social services at the point of care.
- 3** Develop and test new payment strategies that consider the health of children and their parents in tandem and help address parental issues that directly impact the child's health.

FIGURE 1**BIOMEDICAL FACTORS ARE JUST THE TIP OF THE ICEBERG FOR CHILD HEALTH AND WELL-BEING****BACKGROUND: POVERTY AND HEALTH**

While the health care system is well equipped to address the biomedical factors affecting a person's health, it does not have a systematic way to identify, measure and address the psychosocial and economic factors that undermine the health and well-being of children and adults.⁴ Socioeconomic stressors, including poverty, social isolation, housing conditions, food insecurity and job insecurity, can lead to poor health and exacerbate chronic conditions.⁵ These unmet social needs often lead to non-optimal utilization of the health care system, higher health care costs and a heavy burden on the health care workforce.

Individuals from lower-income households are twice as likely to face serious illness and premature death.^{6,7} In addition, families who have difficulty paying housing-related bills have higher rates of emergency hospitalizations than families who are more economically secure⁸, and children experiencing food insecurity are more likely to have been hospitalized at some point since birth.^{9,10} Lower socioeconomic status is also associated with longer hospital stays and higher hospital readmission rates.

Identifying and addressing psychosocial and economic barriers to health is especially critical in pediatrics as employing the right interventions early can help establish a foundation for a lifetime of well-being and productivity and prevent the onset or escalation of many costly and debilitating diseases.¹¹⁻¹⁴ For example, addressing risk factors that exacerbate asthma, such as triggers in the home or environment, is likely more efficient in the long term than multiple emergency department visits and repeat hospitalizations.¹⁵

Research is also showing that primary care physicians and pediatricians believe unmet social needs are directly compromising their patients' health. However, only 20% of physicians participating in a Robert Wood Johnson Foundation survey felt confident in their ability to address their patients' social needs.¹⁶ In other words, physicians reported that the services their patients need to improve their health are often non-medical in nature and therefore, outside their traditional scope of practice (Figure 1).

WHAT WE LEARNED

Investigators at PolicyLab and partners from CHA conducted a series of studies using the Pediatric Health Information System (PHIS), which includes data from 43 freestanding children's hospitals across the country. To assure that cost data would be comparable across hospitals, each service that a patient received was assigned a standardized cost^d.¹⁷ Key findings include:

1 CHILDREN FROM LOWER-INCOME HOUSEHOLDS ACCRUE HIGHER INPATIENT COSTS.

The relationship between ZIP code-based median annual household income and inpatient hospital resource utilization was examined using standardized costs for more than 116,000 hospitalizations for common conditions, including asthma, diabetes, bronchiolitis and respiratory syncytial virus, pneumonia and kidney and urinary tract infections in 2010 and 2011.^e After adjusting for illness severity, age, gender and race, children from lower-income ZIP codes had higher inpatient standardized costs for four of the five common conditions. In total, patients from the lowest-income ZIP codes accrued \$8.4 million more individual hospitalization-level standardized costs (counting all hospitalizations separately) and \$13.6 million more patient-level standardized costs (grouping multiple hospitalizations for the same child together) than children from the highest-income ZIP codes.^f The discrepancy in hospitalization-level costs likely reflects

challenges with discharge that prolong length of stay or require additional hospital resources. The discrepancy in standardized costs at the patient level indicates that multiple hospitalizations and readmissions contribute to the higher overall inpatient standardized costs for children from lower-income ZIP codes. Asthma and diabetes, the two chronic conditions examined, revealed the greatest differences in standardized costs across income groups, likely reflecting poorer disease control among patients from lower-income ZIP codes.¹⁸

2 CHILDREN FROM LOWER-INCOME HOUSEHOLDS SPEND MORE HOURS IN THE HOSPITAL.

The relationship between ZIP code-based median annual household income and hospital length of stay was examined using data from admissions at 39 freestanding children's hospitals in 2011. The median length of stay across more than 230,000 hospitalizations was 55 hours. After adjusting for illness severity, lengths of stay for children with ambulatory-care sensitive conditions, complex chronic conditions and technology-dependent comorbidities were longer for patients from the lowest-income ZIP codes than for patients from the highest-income ZIP codes. Length of stay was up to 19% longer for the lowest-income group compared to the highest-income group for patients with four or more complex chronic conditions^g.¹⁹

^dThe PHIS database reports the amount that each hospital charges payers for each service provided. This data on individual hospital service charges was converted to costs using hospital and department specific cost-to-charge ratios. The cost estimates for each hospital were collected for each service, and the median cost estimate in the list for each service was recorded in a standardized cost master index. This master index was used to determine the standardized cost of services for patients in these studies. While standardized costs are helpful for comparing costs across different hospitals, it is important to note that standardized costs do not represent actual costs incurred at any particular hospital or actual reimbursements received for care. The amount that hospitals are reimbursed depends on the individual contracts hospitals have with private insurers and public payers, such as state Medicaid programs. Medicaid payments are a fraction of what private insurers pay and often do not cover the hospital's cost of care.

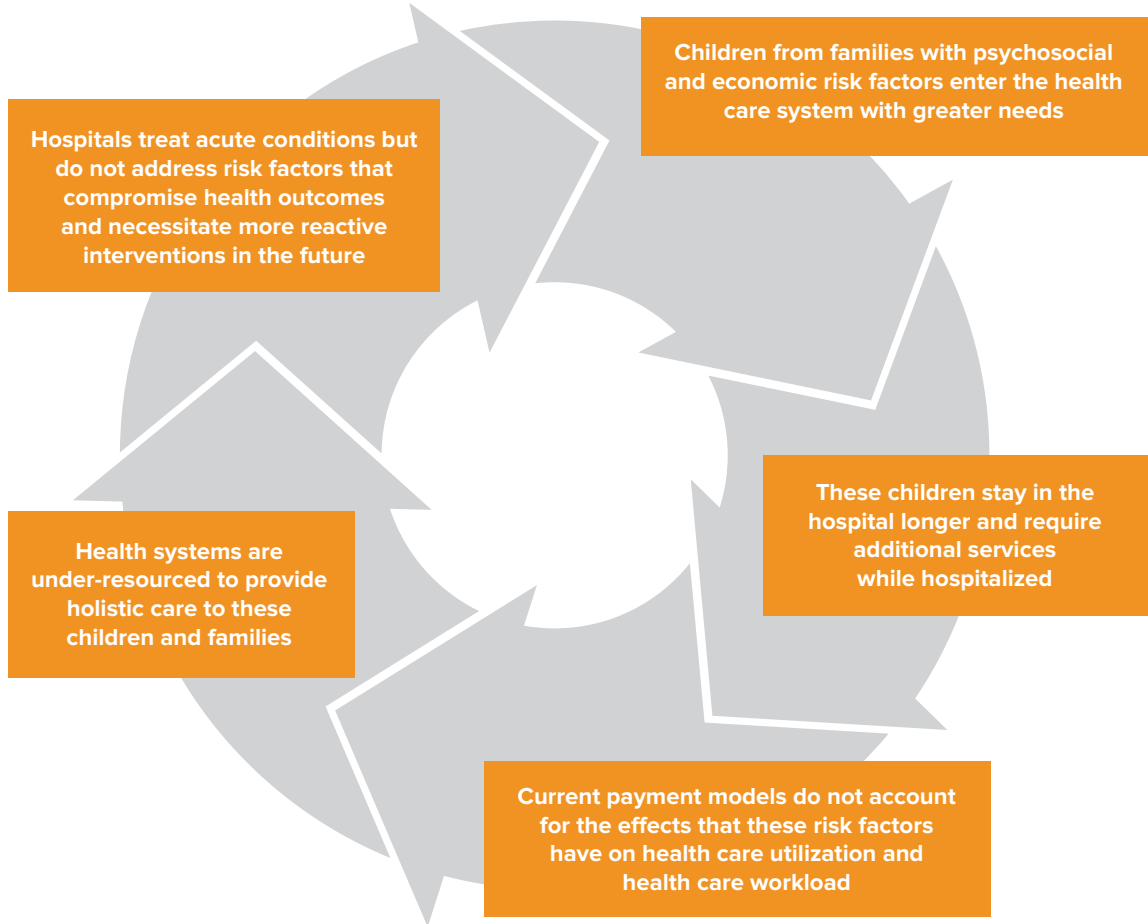
^eThese five conditions were chosen because: (1) they are common causes for hospitalizations, and (2) they include acute exacerbations of chronic illnesses (asthma and diabetes), as well as acute infections (bronchiolitis and respiratory syncytial virus, pneumonia and kidney and urinary tract infections).

^fUnder existing payment models, higher inpatient costs to hospitals do not necessarily result in higher hospital reimbursements. How hospitals are reimbursed for services depends on the contract that hospitals have with individual private insurance companies and public payers, such as state Medicaid programs. Often, hospital reimbursements are based on a patient's diagnosis and illness severity or a fixed per-diem payment for as long as the patient meets certain clinical inpatient criteria.

^gIt is important to note that longer lengths of stay do not necessarily translate into higher reimbursements. Under a DRG reimbursement system, payments are based on diagnosis and illness severity without regard to time spent in the hospital. Even in per-diem reimbursement models, payment for extra hospital days are often denied if patients no longer meet specific inpatient criteria. However, these extra days are often necessary to ensure a safe and effective discharge for patients with certain psychosocial and economic risk factors.

FIGURE 2

**THE PROBLEM CYCLE:
CHALLENGES TO PROVIDING VULNERABLE CHILDREN WITH HOLISTIC CARE**



Our research found that children from lower-income ZIP codes stay in the hospital longer, require additional services while hospitalized and are readmitted more frequently than similar children from higher-income ZIP codes. Breaking this cycle will require tweaking the structure of the health care delivery system and the processes of care used to treat those children.

3 CHILDREN FROM LOWER-INCOME HOUSEHOLDS EXPERIENCE HIGHER RATES OF MORTALITY IN THE HOSPITAL.

Researchers examined data from more than 1 million hospitalizations at 42 freestanding children’s hospitals during 2009 and 2010 and found that while pediatric mortality was low, and lower than expected across all socioeconomic groups, rates of inpatient mortality were higher for children from the lowest-income ZIP codes. Specific patient groups that experienced significant

differences in mortality rates based on ZIP code included neonatal, cardiac, gastrointestinal, neurologic and other surgical patients. It is not clear whether this is because socioeconomic status affects certain conditions more than others, or if hospital processes, such as the provision of additional services designed to assist vulnerable patients, were better able to address socioeconomic disparities for certain patient groups.²⁰

Figure 2 above illustrates how these findings are part of a larger health system struggle to provide holistic care to vulnerable children and families.



WHY IT MATTERS

Failing to incentivize health systems to address psychosocial and economic risk factors affecting patients' health **wastes resources and perpetuates an inefficient and reactive model of care.**

Children with significant psychosocial and economic risk factors use emergency health care more often, stay in the hospital longer and are readmitted more frequently than children without those risk factors. Thus, the health care

system is currently paying for expensive, reactive care that might have been avoided if the risks were identified and addressed appropriately earlier.

Failing to account for the additional resources needed to provide quality treatment to patients with psychosocial and economic risk factors places a **heavy burden on the health care workforce.**

Unmet social needs often lead to overutilization of the health care system. Caring for high-risk families places a strain on health care providers since most inpatient reimbursement models do not include adequate compensation for children and families who need extra time, effort and resources to ensure high-value care. The extra resources these patients may need include social workers, case managers, care coordinators, health

navigators, community health workers, additional time with traditional clinical staff and extra days in the hospital when it is clear that the patient's home is not equipped for a safe discharge. Without the funds to cover the costs of these key health care partners and resources, providers struggle to deliver holistic care to these patients.

Ignoring the effects of psychosocial and economic risk factors on health compromises child well-being and exacerbates health disparities.

Unmet social needs explain a large portion of health disparities for children from lower socioeconomic households.^{21,22} Studies have shown that racial minorities who are hospitalized with asthma or wheezing are twice as likely to be readmitted to the hospital as non-minority children. However, parental social hardships, such as low income and educational attainment, difficulty

finding work and borrowing money, not owning a car and being unmarried explain more than 40% of the disparities in the children's health outcomes.²² Thus, failing to acknowledge social determinants of health in health system design and reimbursement will continue to exacerbate disparities in health care utilization and outcomes.

Research that clarifies the effects of psychosocial and economic risk factors on health is necessary in order to allocate resources to maximize quality, reduce costs and promote value in health care delivery.

Health care planners, payers and policymakers need accurate information on the relationship between socioeconomic status and health care utilization to estimate resources needed to deliver care to patients and to appropriately compensate the hospitals, providers

and clinicians who care for these patients. Health systems seeking to become ACOs will also benefit from this information as they will be taking on the risk of population health management, and psychosocial risk factors are intricately linked to population health.

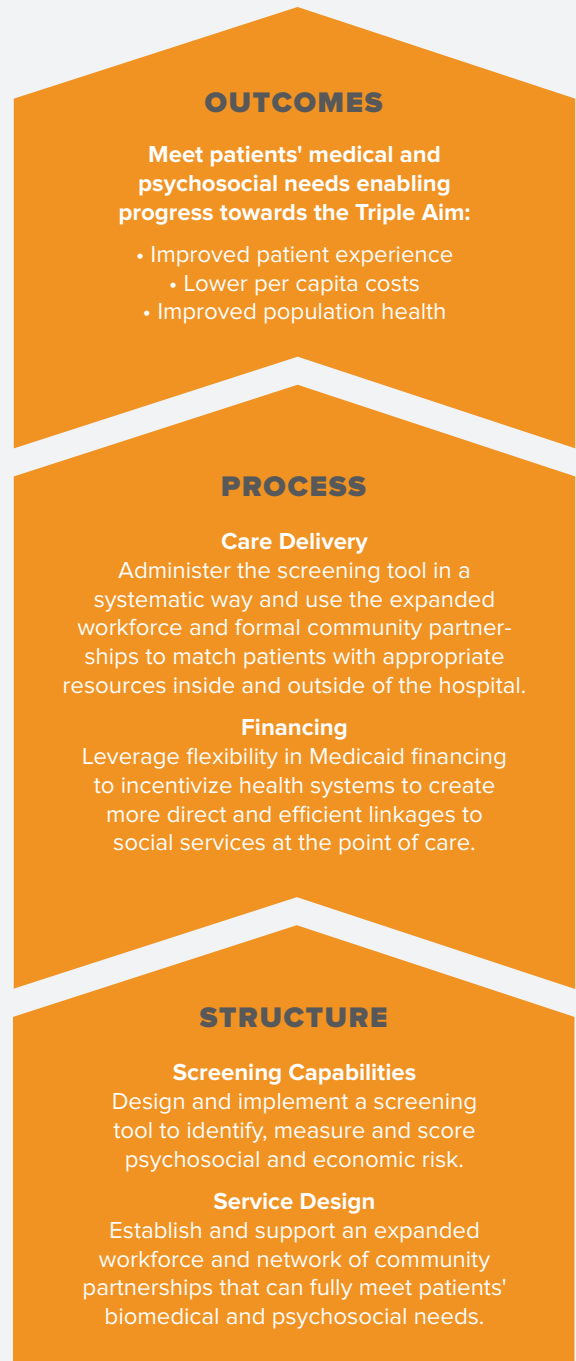
WHAT WE CAN DO

The evidence connecting children's low socioeconomic status to higher health care utilization, higher health care costs and worse health outcomes highlights the need to incentivize health care providers to effectively link families at the point of care to services that can help alleviate the pressures of poverty. As Figure 3 demonstrates, successfully addressing the needs of children with significant psychosocial and economic risk factors will require tweaking the structure of the health care delivery system and the processes of care used to treat those children. Specifically, altering the structure of the health care delivery system will involve designing a screening tool to identify and measure psychosocial and economic risk, and establishing an expanded workforce or formal network of community partners that can fully meet patients' biomedical and psychosocial needs. Updating the processes of care used to treat vulnerable children will involve administering the screening tool in a seamless and systematic way and leveraging the flexibility in various public and private payment streams to allow for and incentivize health systems to partner with community organizations and link patients with the necessary resources at the point of care. Making these changes to the structures of the health care delivery system and the way care is delivered to vulnerable patients will require the involvement of multiple stakeholders, including individual providers and health systems, as well as private insurance companies and public payers, including state Medicaid programs. The following recommendations include specific opportunities for action for each stakeholder group.

Some of these opportunities for action may require more up-front investments by participating payers or a redirection of funds to help providers identify and address patients' psychosocial and economic risk factors proactively. However, if successful, this population approach can help reduce overutilization of the health care system while improving health outcomes, reducing health disparities, improving the patient experience and lowering the per capita cost of care in the long term. Investments in addressing psychosocial and

FIGURE 3

ROADMAP TO ACHIEVING BETTER HEALTH OUTCOMES FOR VULNERABLE CHILDREN



Achieving the Triple Aim of improved patient experience, lower per capita costs and improved population health will require tweaking the structure of the health care delivery system and the processes of care used to treat vulnerable children.

economic risk factors should help reduce the number of hospitalizations, lengths of stay and readmissions for patients in this high-risk population. If hospitals and primary care providers are more thoughtfully incentivized to provide holistic services to high-risk patients, they can then be held accountable for using

those funds effectively to mitigate risk factors affecting health and driving inefficient utilization of the health care system. Health systems and payers can then share in cost savings that result from providing patients with holistic, higher-value care that promotes health and well-being.

RECOMMENDATIONS FOR PROVIDERS (HOSPITALS, HEALTH SYSTEMS AND CLINICIANS):

- 1 Develop and implement a tool to screen for psychosocial and economic risk factors in real time and “score” this risk so that it can be used in risk-adjustment and payment models. This tool should be used to collect, document and update psychosocial information in a systematic way as part of a child’s history and physical exam during patient encounters.
- 2 Use information gleaned from the screening tool to identify appropriate resources to help the patient and family address unmet needs that negatively affect health outcomes.

EXAMPLES

- The Psychosocial Assessment Tool (PAT) is a specialized screening tool for pediatric oncology patients and families that was designed in 2011 by clinicians at The Children’s Hospital of Philadelphia. So far, studies of the PAT have confirmed that administering an evidence-based psychosocial screener is feasible in pediatric settings. In addition, families who were screened received more services from social and child life specialists than families who were not screened, and of the families who were screened, those with higher risk scores received more services than those with lower risk scores.²³
- WE CARE, which stands for Well Child Care, Evaluation, Community Resources, Advocacy, Referral and Education, is a clinic-based psychosocial screening and referral tool that was designed in 2006 by researchers at The Johns Hopkins School of Medicine. Mothers of healthy infants at four urban community health clinics were asked to complete the 10-item questionnaire, which screens for psychosocial risk factors, including needs for child care, education, employment, food security and housing conditions. Based on answers to the questionnaires, pediatricians referred families to the appropriate community resources. Results of this study indicated that brief family and psychosocial screening is feasible in pediatric practices, and that systematically screening for psychosocial risk factors and making appropriate referrals during a child’s well-visit increases the chances that families will receive the community supports they need.^{24,25}
- HelpSteps is a web-based screening tool that was designed in 2004 by clinicians at Boston Children’s Hospital. This tool, which is administered to families in waiting rooms, asks questions related to access to health care, housing, food security, income security, domestic violence, safety equipment use and substance abuse. Based on the families’ responses, the system generates a list of relevant social service agencies with maps showing where they are located. Once the families select their preferred agencies, the system prints an official referral form for the family and a copy for the medical provider. A study that examined the effectiveness of the tool found that 40% of those who received referrals contacted the agencies, and of those families, 53% stated that the agencies helped them address their main problems.²⁶

3 Build direct linkages at the point of care (either through internal staff or through formal, strategic partnerships with local nonprofits) that will more

efficiently provide families with resources that can alleviate the impact of poverty on health and health care utilization.

EXAMPLES

- Health Leads is a program that incorporates social service and community partnerships into the patient care model. Clinicians at Health Leads’ participating hospitals, health centers and clinics in Baltimore, California, Chicago, New England, New York and Washington, DC ask patients about food security, housing conditions and other factors that affect health.²⁷ If the clinician determines that a patient has unmet psychosocial needs, they refer the patient to the on-site Health Leads desk with a written “prescription” for the needed service. When patients present their referral, a Health Leads advocate works with the family to secure the relevant resources. The advocate also follows up with the family regularly by phone, email and during clinic visits and provides the patients’ health care providers with relevant updates. While the Health Leads model currently relies on a clinician’s verbal screen, this model can be adapted to an electronic format.
- Medical-legal partnerships can help address legal issues contributing to patients’ health. More than 262 health centers in 36 states have implemented medical-legal partnerships to help hold landlords, schools and other agencies accountable for complying with laws that affect children’s health.²⁸⁻³⁰ The pediatric medical-legal partnership at St. Christopher’s Children’s Hospital, which serves a large, low-income population in Philadelphia, screened 1,700 families and found that more than 60% had unmet legal needs that threatened their child’s health. When a 5-year-old with severe, persistent asthma presented to St. Christopher’s with breathing trouble, her pediatrician referred the family to the on-site legal partners who helped them obtain a housing voucher to relocate from their apartment that had severe mold, which was exacerbating the child’s asthma.²⁹ Another medical-legal partnership in a rural part of Illinois provides patients and families with legal support to address health and social issues, including Medicaid coverage, Social Security benefits, housing assistance, family law and end-of-life services. Between 2007 and 2009, the health system realized a 319% return on investment attributable to a reduction in unreimbursed care among newly insured patients.³¹
- Creating and fostering formal, strategic partnerships that capitalize on the unique expertise of community-based organizations is especially important to improving child health outcomes and overall population health.³² For example, in 2013, the Stamford Hospital System in Connecticut formally partnered with 12 community organizations, including the Stamford housing authority, to create and sustain a Health and Wellness District in the area surrounding the hospital, which was identified as having the highest prevalence of chronic disease. This group of community partners, called the Stamford Community Collaborative, has worked together to improve housing conditions, establish community health centers, plant local gardens and greenhouses and initiate childhood obesity prevention and nutritional outreach programs.^{33,34} To facilitate long-term improvements, hospital systems should use their Community Health Needs Assessment process to identify the most pressing local health needs and then leverage the appropriate local expertise to help revitalize the community, promote healthier lifestyles and mitigate the psychosocial and economic risk factors that have a significant effect on health care utilization and outcomes.

RECOMMENDATIONS FOR PAYERS (PUBLIC AND PRIVATE):

- 1** Establish payment reforms that incorporate psychosocial and economic risk factors into health care reimbursement models.
 - **Translate the results from the screening tool into a psychosocial risk score that can be incorporated into the algorithm used to calculate reimbursements to health systems for the care coordination, direct social service provision and referrals to social services at the point of care.** Payers already consider severity of illness scores in determining hospital payment levels in DRG-based systems. The software algorithm used to adjust DRG payments uses clinical data to divide patients in each diagnosis category into four illness severity sub-groups: minor, moderate, major or extreme severity.³⁵ Since these subgroups reflect patient resource utilization within diagnostic groupings, each subcategory has a different reimbursement level. A psychosocial risk score could be an additional input in this payment algorithm. A similar adjustment could be made for per-diem, bundled^h and globalⁱ payments.
 - **Restructure pay-for-performance^j and Alternative Quality Contract^k reimbursement systems to avoid penalizing hospitals that care for patients with significant psychosocial and economic risk factors.** Payers should include patients' risk scores in quality determination algorithms and reconsider readmission penalties in hospital payments for high-risk patients. A 2013 National Quality Forum (NQF) report found that failing to adjust for economic and other risk factors “can lead to incorrect inferences about quality” and “misleading measures of performance.”^{36,37} Policies that penalize hospitals for readmissions within 30 days of discharge are especially problematic for hospitals that treat large populations with high psychosocial risk levels since these patients are often readmitted for reasons outside of the health care provider's direct control.³⁸ The Hospital Readmission Accountability and Improvement Act, which was introduced in Congress in 2014, would require the Centers for Medicare and Medicaid Services (CMS) to risk adjust their Hospital Readmissions Reduction Program to account for socioeconomic status.³⁹ If this type of expanded risk adjustment was incorporated into health system payment models, hospitals could use the additional funds to address risk factors contributing to readmissions. Under a pay-for-performance system, hospitals could then be held accountable for providing enhanced services to patients demonstrating greater need.
- 2** Leverage flexibility in Medicaid financing to incentivize health systems to either a) increase internal social work staffing, or b) expand partnerships or co-locate with external nonprofit organizations that will create more direct and efficient linkages to needed social services at the point of care.
 - **Expand eligibility for the Medicaid Targeted Case Management (TCM) program to vulnerable children with high psychosocial and economic risk scores.** TCM programs, which provide Medicaid reimbursements

^h Bundled payment system: hospitals receive a fixed amount to cover a defined set of services, such as all services related to a patient's diabetes care over a set period of time.

ⁱ Global payment system: hospitals receive a fixed amount to cover all hospital services for a patient for one year.

^j Pay-for-performance reimbursement systems reward hospitals for meeting pre-determined benchmark measures for quality outcomes and efficiency. Low-performing hospitals may be subject to penalties.

^k Alternative Quality Contracts reimburse hospitals with global payments that are explicitly tied to achieving specific quality goals. These contracts define the rate of increase for each contract group's budget over a five-year period.

to case managers who coordinate access to necessary medical, social, educational and other services that promote health, currently exist in almost all states. However, each state currently limits eligibility to specific populations, and many do not include children with identified psychosocial and economic risk factors.⁴⁰ Pennsylvania's TCM program, for example, is currently limited to individuals with HIV/AIDS.⁴¹ Expanding eligibility to children with high psychosocial and economic risk scores would incentivize health systems to expand their network of social workers and would provide the necessary reimbursement to proactively address barriers to health.

- **Expand the use of bundled or global payments for children with high psychosocial and economic risk scores and give health systems flexibility to spend those payments on non-traditional medical services that directly affect children's health.** Massachusetts, for example, is currently piloting a pediatric asthma bundled payment program for high-risk patients enrolled in Medicaid. The pilot allows health care providers to allocate portions of the bundled payments towards non-traditional services to mitigate environmental triggers, including home visits, asthma education, care coordination provided by community health workers and supplies, including hypoallergenic mattresses.⁴² The Coordinated Care Organization (CCO) model that Oregon Medicaid implemented in 2012 is another promising example of how global payment structures can provide the necessary flexibility to improve health outcomes. The 16 CCOs in Oregon, which are governed by partnerships between health care providers, community members and other health system stakeholders, use their flexible global budgets to cover a variety of non-

traditional health services, including community health workers, health programming at local schools, parenting and exercise classes and non-emergent medical transportation. The CCOs are then held accountable for achieving defined health and financial outcomes. In their mid-year 2014 report, Oregon's CCOs reported improvements in a range of outcomes, including decreases in emergency department visits and hospital admissions for chronic diseases, while also reducing per member spending by 2%.^{43,44} This expanded use of bundled or global payments for children with high psychosocial and economic risk scores would give health systems the flexibility they need to partner with social service and other non-traditional health care workers to provide holistic and preventive treatments to children.

- **Restructure the scheduled reductions in Disproportionate Share Hospital (DSH) payments¹ to help offset costs associated with caring for large populations of patients with psychosocial and economic risk factors, including the costs of the expanded workforce necessary to address these risks to patients' health.** Though federal law requires Medicaid programs to provide DSH payments to hospitals that treat a disproportionate share of Medicaid and uninsured patients, a provision in the ACA reduces the amount of DSH payments that qualify for federal matching funds. While it is true that after implementation of the ACA fewer patients will be uninsured, unadjusted Medicaid payments are still insufficient to provide comprehensive care to high-risk patients. A restructured DSH payment that considers the number of Medicaid patients with certain risk factors could be used to support the expanded workforce needed to provide quality care for these patients.

¹ Disproportionate Share Hospital (DSH) payments were instituted in 1985 to help compensate hospitals for treating a disproportionate share of uninsured or low-paying Medicaid patients.

3 Develop and test new payment strategies that consider the health of children and their parents in tandem and help address parental issues that directly impact the child's health.

- **Expand eligible Medicaid reimbursements to include services for uninsured (or underinsured) parents and clearly define which services are covered based on evidence about the types of parental health issues that directly impact the health and development of the child.** For example, since there is strong evidence that a parent's mental health has a significant impact on a child's health and development and the likelihood that the child receives necessary medical services, Medicaid programs in some states, including Connecticut, Illinois, Minnesota, Montana, Ohio and Oklahoma, reimburse for parental mental health screenings under the child's Early and Periodic Screening and Diagnostic Treatment benefit, even when the parent is not enrolled in Medicaid.^{45,46} If the parent is screened during the child's well visit or during an acute care visit, the service is reimbursed under the child's Medicaid plan.⁴⁶ While an increasing number of states are covering parental screening services, intervention and treatment programs targeted towards parents and their children in pediatric settings should also be covered since screening alone is not sufficient to improve health outcomes for

parents or children.⁴⁷ While coverage for treatment programs is not widespread across the country, mothers diagnosed with postpartum depression in Illinois are eligible for early intervention services.⁴⁵ This type of cross-generational care should be expanded to other services that significantly affect children's health outcomes.

- **Expand coverage for parenting and other educational programs and services that have a direct impact on children's health and well-being.** For example, Iowa Medicaid covers parental training and education programs for caregivers of children with specific diagnoses, such as failure to thrive (under nutrition often due to inadequate caloric intake or absorption).⁴⁵ In addition, Washington State covers brief interventions and counseling through Triple P, an evidence-based intervention program, which promotes positive parenting skills, under a child's Medicaid plan.⁴⁸ Similarly, New Jersey Medicaid covers Parent-Child Interaction Therapy, a joint program for parents and children that teaches effective parenting skills.⁴⁹ Expanding coverage under a child's Medicaid plan for evidence-based programs targeted towards caregivers will help equip caregivers with the skills necessary to promote the health, well-being and positive development of their children.

CONCLUSION

Children from families with psychosocial and economic risk factors enter the health care system with greater needs. However, few efforts have been made at a system-wide level to address the effects that socioeconomic status has on health care utilization and health care workload. As a result, health systems and providers are under-resourced to address psychosocial and economic risk factors that compromise health outcomes and necessitate more reactive interventions in the future. Without appropriate reforms that allow and incentivize health systems to link high-risk families with necessary resources at the point of care, future attempts at implementing accountable-care and pay-for-performance mechanisms in settings that care for children with psychosocial and economic risk factors may exacerbate these problems.

As our country focuses on improving value in health care, now is an opportune time to take actions to help health care providers work in concert with community-based organizations to address a range of psychosocial and economic risk factors that significantly affect children's health. Incorporating psychosocial risk scores into reimbursement calculations is a natural corollary to the current expansion of ACOs, bundled and global

payment models and pay-for-performance systems. Now that the ACA has expanded access to health insurance, it is essential that the health care system establish a routine and systematic method for matching the expanded patient base with the supports necessary to ensure that health systems meet patients' needs in the most effective, efficient and patient-centered manner. Leveraging Medicaid and other reimbursement streams to incentivize health care organizations to create strategic partnerships with community organizations and support linkages to social services at the point of care will help create a more integrated upstream approach to improving the health of vulnerable children and families.

In order to improve patient experiences, lower per capita costs and improve population health, policymakers and health system leaders need to work towards incorporating the full bio-psychosocial spectrum of needs into service design, care delivery and reimbursement. By redirecting funds currently spent on expensive, reactive care to a more proactive model, psychosocial and economic risk factors can be identified and addressed earlier, which will help promote overall child health and well-being.

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THE AUTHORS

JENNIFER JONAS, B.A., B.S.E. is a research associate at PolicyLab at The Children’s Hospital of Philadelphia Research Institute.

JENNIFER EDER, M.P.H. is a policy and research associate at PolicyLab at The Children’s Hospital of Philadelphia Research Institute.

KATHLEEN NOONAN, J.D. is co-director of PolicyLab at The Children’s Hospital of Philadelphia Research Institute, core faculty at the University of Pennsylvania Master of Public Health Program and an adjunct professor at the Perelman School of Medicine at the University of Pennsylvania.

DAVID RUBIN, M.D., M.S.C.E. is co-director of PolicyLab at The Children’s Hospital of Philadelphia Research Institute, a professor of pediatrics at the Perelman School of Medicine at the University of Pennsylvania and an attending physician in the Division of General Pediatrics at The Children’s Hospital of Philadelphia.

EVAN FIELDSTON, M.D., M.B.A., M.S.H.P. is a faculty member at PolicyLab at The Children’s Hospital of Philadelphia Research Institute and an assistant professor of pediatrics at the Perelman School of Medicine at the University of Pennsylvania. He is also an attending physician in the Division of General Pediatrics and Medical Director of Clinical Operations at The Children’s Hospital of Philadelphia.

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The aim of PolicyLab at The Children’s Hospital of Philadelphia is to achieve optimal child health and well-being by informing program and policy changes through interdisciplinary research.

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PolicyLab

The Children's Hospital of Philadelphia
34th Street and Civic Center Boulevard
CHOP North, Room 1528
Philadelphia, PA 19104
Phone: 267-426-5300
Fax: 267-426-0380
PolicyLab@email.chop.edu

 @PolicyLabCHOP